

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 06-065140

(43)Date of publication of application : 08.03.1994

(51)Int.Cl.

C07C 61/04
C07C 51/377
// C07B 61/00

(21)Application number : 04-222335

(71)Applicant : DAI ICHI SEIYAKU CO LTD

(22)Date of filing : 21.08.1992

(72)Inventor : HAYANO TAKESHI
KIMURA YOICHI
KUBOTA HIDEKI

(54) PRODUCTION OF 2-FLUOROCYCLOPROPANECARBOXYLIC ACID

(57)Abstract:

PURPOSE: To readily obtain the compound which is an intermediate for new quinolone derivatives in good yield by treating a 2-fluoro-2-halogenocyclopropanecarboxylic acid with an alkali metal or an alkaline earth metal in the presence of a hydrogen source.

CONSTITUTION: The objective method for producing 2-fluorocyclopropanecarboxylic acid of formula II comprises treating a 2-fluoro-1-

halogenocyclopropanecarboxylic acid of formula I (X is Cl, Br or I) (X is especially preferably Cl) with an alkali metal or an alkaline earth metal (Li, Na, K, Mg or Ca is especially preferred) in the presence of a hydrogen source such as water or an alcohol. The dehalogenation can be carried out while suppressing the inversion of the steric configuration of a substituent group on the carbon atom to which F is bonded according to this method.

The reaction is carried out by using especially calcium as the metal, liquid ammonia as the solvent and water as the hydrogen source and especially preferably cooling the reactional mixture to the boiling point or below of the liquid ammonia.



LEGAL STATUS

[Date of request for examination]

11.05.1999

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

3159537

[Date of registration]

16.02.2001

[Number of appeal against examiner's decision]

of rejection]

[Date of requesting appeal against examiner's
decision of rejection]

[Date of extinction of right]